

REMARKS / ARGUMENTS

The present application includes pending claims 1-31, all of which have been rejected. The Applicant respectfully submits that the claims define patentable subject matter.

Claims 1, 2-8, 10-12, 14-18, 20-22, 24-28 and 30-31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over USP 6,272,107 ("Rochberger"), in view of USP 6,678,259 ("Schwengler") and USP 6,457,098 ("DeKoning"). Claims 3, 9, 13, 19, 23 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rochberger, Schwengler and DeKoning in view of USP 6,970,919 ("Doi"). The Applicant respectfully traverses these rejections at least for the reasons previously set forth during prosecution and at least based on the following remarks.

I. EXAMINER'S RESPONSE TO ARGUMENTS

The Examiner states the following in the Final Office Action:

Applicant argues (see pages 15-16) that Putting aside for the moment whether or not this is an accurate assessment of Schwengler, the Examiner has failed to provide "articulated reasoning with some rationale underpinning to support the legal conclusion of obviousness" in the detailed manner described in KSR. The Examiner fails to explain any plausible motivation for making this combination. The Examiner also makes the unsupported allegation that "by using different communication types for primary and backup paths, network can be made to be more reliable in case of failure in the primary path." (See OA, p. 3.). The Examiner provides no explanation of how Rochberger's network would allegedly be enhanced and made more reliable. Notably, the Examiner has ignored the fact that Rochberger relates to Asynchronous Transfer Mode (ATM) networks, which are based on wired data transmissions. Why would a person of ordinary skill in the art incorporate Schwengler's alleged teaching ("primary and

secondary path being different communication type") into Rochberger's wired ATM system if, Schwengler addresses a problem with wireless transmissions in a Local Multipoint Distribution System (LMDS)? The answer is that a person of ordinary skill in the art simply would not make this combination. There would be no need to use primary and secondary paths of different communication type to remedy "large obstruction" problems in line of site transmissions, since such problems would not exist (and are not an issue) with ATM wired transmissions disclosed by Rochberger (the Applicant has addressed the additional deficiency of Schwengler herein below, namely, Schwengler's first and second communication paths do not use different communication protocols and they are not of different communication types).

Examiner's answer: ... Secondly, *it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Rochberger's system/method the steps of primary and secondary path being different communication type as suggested by Schwengler.* The motivation is that (as suggested by Schwengler, column 4 lines 42-47) by using different communication types for primary and backup paths, network can be made to be more reliable in case of failure in the primary path; thus overcome the problems associated with primary path failure by utilizing the appropriate different communication path to get around the fault.

Examiner submits that the following are some rationales which may be used when formulating a 103 rejection:

- (1) Combining prior art elements according to known methods to yield predictable results.
- (2) Simple substitution of one known element for another to obtain predictable results.
- (3) Use of known techniques to improve similar devices (methods or products) in the same way.
- (4) Applying a known technique to a known device (method or product) ready for improvement to yield predictable results.
- (5) "Obvious to try" - choosing from a finite number of identified, predictable solutions.
- (6) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

(7) The TSM test. (Although the Supreme Court cautioned against an overly rigid application of TSM, it also recognized that TSM was one of a number of valid rationales that could be used to determine obviousness)

Examiner respectfully submits that, Examiner has indeed met "articulated reasoning with some rational underpinnings to support the legal conclusion of obviousness" for the reasons as follows:

1) Examiner has shown, the combination based on TSM test -The motivation is that (as suggested by Schwengler, column 4 lines 42-47) by using different communication types for primary and backup paths, network can be made to be more reliable in case of failure in the primary path; thus overcome the problems associated with primary path failure by utilizing the appropriate different communication path to get around the fault.

2) Use of known techniques (primary and secondary path being different communication type) to improve (network can be made to be more reliable in case of failure in the primary path; thus overcome the problems associated with primary path failure by utilizing the appropriate different communication path to get around the fault) similar devices (methods or products of Rochberger and Schwengler prior art) in the same way.

3) Known work (primary and secondary path being different communication type) in one field of endeavor (Schwengler prior art) may prompt variations of it for use in either the same field or a different one (Rochberger prior art) based on design incentives (network can be made to be more reliable in case of failure in the primary path; thus overcome the problems associated with primary path failure by utilizing the appropriate different communication path to get around the fault) or other market forces/market place incentives if the variations are predictable (network can be made to be more reliable in case of failure) to one of ordinary skill in the art. Furthermore, in response to applicant's argument that there is simply no rational basis for combining the references, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; or is it that the claimed invention must be expressly suggested in anyone or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

(See Final Office Action, p. 9-12). The Applicant respectfully disagrees. The

Examiner (see above italicized text) states the following:

it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in *Rochberger's system/method the steps of*

primary and secondary path being different communication type as suggested by Schwengler.

The Applicant notes that the relevant claim limitation lacking in Rochberger is “first and second communication paths **use different communication protocols and are of different communication types.**” In other words, not only the primary and secondary paths are of different communication types, but they also **must** use different communication protocols. However, the prior art provided by the Examiner (i.e., Schwengler) does not disclose that the first and second communication paths (e.g., main and backup communication paths) use different communication protocols and are of different communication types.

Thus, unlike *KSR*, where two previously known claim elements were combined, here we have a new claim element, first and second communication paths (e.g., main and backup communication paths) use different communication protocols and are of different communication types, that does not appear in the prior art.

Furthermore, although the PTO’s published guidelines of September 1, 2010, outline seven rationales (numbered 1 – 7 in the above citation) that may support a conclusion of obviousness, all of them fail here, as further discussed below (it seems the Examiner only relied on rationales #7 (TSM test), #3 (use of known techniques), and #6 (known work)).

Rationale #1 fails because the notion of *main and backup communication paths that use different communication protocols and are of different communication types*, recited in independent claims 1, 11, and 21, does not appear in the prior art.

Consequently, claims 1, 11, and 21 are not a combination of prior art elements as required for rationale #1 to support a finding of obviousness.

Similarly, rationale #2 requires the substitution of a known element for another, but *main and backup communication paths that use different communication protocols and are of different communication types* was not a known element. Consequently rationale #2 fails.

In the same fashion, rationales #5 - #7 are also lacking. Rationale #5 fails because *main and backup communication paths that use different communication protocols and are of different communication types* was not known in the prior art and consequently can not be one of a finite number of identified solutions. Rationale #6 fails because there has been no showing that *main and backup communication paths that use different communication protocols and are of different communication types* was known in any field of endeavor. Rationale #7 fails because there is no teaching of *main and backup communication paths that use different communication protocols and are of different communication types* in the prior art, as mentioned above.

Finally, rationales #3 and #4 also fail. Specifically, as recited in the PTO's published guidelines, rationale #3 requires:

To reject a claim based on this rationale, Office personnel must resolve the *Graham* factual inquiries. Office personnel must then articulate the following:

(1) a finding that the prior art contained a "base" device (method, or product) upon which the claimed invention can be seen as an "improvement;"

(2) a finding that the prior art contained a “comparable” device (method, or product that is not the same as the base device) that was improved in the same way as the claimed invention;

(3) a finding that one of ordinary skill in the art could have applied the known “improvement” technique in the same way to the “base” device (method, or product) and the results would have been predictable to one of ordinary skill in the art; and

(4) whatever additional findings based on the *Graham* factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

However, **none** of the findings above have been articulated by the Examiner as required by the PTO published guidelines. Further, because *main and backup communication paths that use different communication protocols and are of different communication types* does not appear in the prior art, the alleged “improvement” technique of using a backup communication path of different type and using a different communication protocol from the main path, was not known, as required by the guidelines above. Rationale #4 requires similar findings and requirements and, consequently, also fails.

Thus, both the KSR test and the seven other rationales identified by the PTO fail to support a finding of obviousness. Consequently, independent claims 1, 11, and 21 and their respective dependent claims are respectfully submitted to be allowable.

REJECTION UNDER 35 U.S.C. § 103

In order for a *prima facie* case of obviousness to be established, the Manual of Patent Examining Procedure, Rev. 6, Sep. 2007 (“MPEP”) states the following:

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."

See the MPEP at § 2142, citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), and *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval). Further, MPEP § 2143.01 states that "the mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art" (citing *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007)). Additionally, if a *prima facie* case of obviousness is not established, the Applicant is under no obligation to submit evidence of nonobviousness.

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

See MPEP at § 2142.

Obviousness also requires that the Examiner provide "some articulated reasoning with some rationale underpinning to support the legal conclusion of obviousness." See *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) quoting *In re Kahn*, 441 F.2d 997,988 (CA Fed. 2006). Put another way, the Examiner

should “identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *KSR*, 127 S. Ct. at 1741. The Examiner should make “explicit” this rationale of “the apparent reason to combine the known elements in the fashion claimed,” including a detailed explanation of “the effects of demands known to the design community or present in the marketplace” and “the background knowledge possessed by a person having ordinary skill in the art.” *Id.*

With these principals in mind, the Applicant turns to the claim rejections.

II. The Proposed Combination of Rochberger, Schwengler and DeKoning Does Not Render Claims 1, 2-8, 10-12, 14-18, 20-22, 24-28 and 30-31 Unpatentable

A. Independent Claims 1, 11 and 21

Claim 1 recites, in part, “wherein each network connection on said first communication path has a corresponding redundant network connection on said second communication path, wherein said first and second communication paths use different communication protocols and are of different communication types, and wherein both of said first and second communication paths are established through the same plurality of network nodes.” In this regard, the Examiner has equated Applicant’s “first communication path” and “second communication path” to Rochberger’s paths going through elements 16-18 and elements 24-26, respectively. (See *e.g.*, Final Office Action, pages 2-3). However, Rochberger’s two communication paths are neither

“established through the same plurality of network nodes” nor are they of different communication types.

The Examiner recognizes this deficiency of Rochberger and concedes that “Rochberger does not explicitly teach, primary and secondary path being different communication type.” (See, *e.g.*, *id.*). In order to make up for this deficiency in Rochberger, the Examiner proposes combining Rochberger with Schwengler (See, *e.g.*, Final Office Action at pages 3-4). In this regard, the Examiner states:

Schwengler in the same or similar field of endeavor teaches primary and secondary path being different communication type (Abstract, column 3 lines 53-55, the redundant or secondary communication path may be a different line of sight path to the same or a different transmitter, or may be a lower frequency communication path. It is to be appreciated that this embodiment of the present invention, utilizing a primary and a secondary transmitter, allows a lower frequency non-line of sight link to be used as a backup for a primary communication path that does require line of sight).

(See, *e.g.*, *id.*). Putting aside for the moment whether or not this is an accurate assessment of Schwengler, the Examiner has failed to provide “articulated reasoning with some rationale underpinning to support the legal conclusion of obviousness” in the detailed manner described in *KSR*. Rather, the Examiner attempts to support the claim rejections as follows:

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Rochberger's system/method the steps of primary and secondary path being different communication type as suggested by Schwengler. *The motivation is that (as suggested by Schwengler, column 4 lines 42-47) by using different communication types for primary and backup paths, network can be made to be more reliable in case of failure in the primary path; thus*

overcome the problems associated with primary path failure by utilizing the appropriate different communication path to get around the fault. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

(*Id.* (emphasis added).) In other words, the Examiner apparently alleges that because Schwengler teaches a way to overcome large obstructions in the line of site path of a transmission, a person of ordinary skill in the art somehow would have been motivated to incorporate Schwengler's alleged teaching of "primary and secondary path being different communication type" into Rochberger's. The Examiner fails to explain any plausible motivation for making this combination. The Examiner also makes the unsupported allegation that "by using different communication types for primary and backup paths, network can be made to be more reliable in case of failure in the primary path." (See OA, p. 3.). The Examiner provides no explanation of how Rochberger's network would allegedly be enhanced and made more reliable. Notably, the Examiner has ignored the fact that Rochberger relates to Asynchronous Transfer Mode (ATM) networks, which are based on wired data transmissions. **Why would a person of ordinary skill in the art incorporate Schwengler's alleged teaching ("primary and secondary path being different communication type") into Rochberger's wired ATM system if, Schwengler addresses line-of-sight problem associated only with wireless transmissions in a Local Multipoint Distribution System (LMDS)?** The answer is that a person of ordinary skill in the art simply would not make this combination. There would be no need to use primary and secondary paths of

different communication type to remedy “large obstruction” problems in line of site transmissions, since such problems would not exist (and are not an issue) with ATM wired transmissions disclosed by Rochberger (the Applicant has addressed the additional deficiency of Schwengler herein below, namely, Schwengler’s first and second communication paths do not use different communication protocols and they are not of different communication types).

In conclusion, there simply is no rational basis for combining the references in the manner suggested by the Examiner. Instead, the Examiner appears to be proposing the combination based solely on improper hindsight. As such, the rejections based on the proposed combination of Rochberger and Schwengler are improper and should be withdrawn.

Moreover, even if the references are combined in the manner suggested by the Examiner, independent claims 1, 11, and 21 are still patentable because the resulting combination does **not** include at least the following limitation of claim 1: “wherein said first and second communication paths use different communication protocols and are of different communication types, and wherein both of said first and second communication paths are established through the same plurality of network nodes,” as recited by the Applicant in independent claim 1.

The Final Office Action states the following:

Regarding claim 1, Rochberger teaches a method comprising: establishing a second communication path (figures 1 or 2 or 3 or 10 or 11 or 12 or 15 or 16, path going through elements 24 and 26) that is

independent of a first communication path (figures 1 or 2 or 3 or 10 or 11 or 12 or 15 or 16, path going through elements 16 and 18) that couples at least two end points via at least a first broadband (i.e. ATM) network (column 10, lines 14-20, the principle of the method of the first embodiment is that two call paths are set up between the source and destination nodes: a primary call path and a redundant, i.e., secondary, call path. The two call paths are, however, associated with each other in the switching tables of the two end nodes, i.e., the source and destination nodes), wherein each network connection on first communication path (figures 1 or 2 or 3 or 10 or 11 or 12 or 15 or 16, path going through elements 16 and 18) between at least two end points (column 10 line 20, two end nodes, i.e., the source and destination nodes), has a corresponding redundant network connection (figures 1 or 2 or 3 or 10 or 11 or 12 or 15 or 16, path going through elements 24 and 26) on second communication path, and wherein first and second communication paths are of different types (column 10 lines 14-20, different types are satisfied by one path being primary and the other being redundant); and transferring information that would be normally transferred over first communication path between at least two endpoints via established second communication path over corresponding redundant network connection (column 12 lines 10-15, at this point, data flows from the source user to the destination user over the redundant path (which is now the active path). Both the source and destination users are unaware that a break occurred in the active path aside from a short interruption in the flow of data cells).

Rochberger does not explicitly teach, primary and secondary path being different communication type.

Schwengler in the same or similar field of endeavor teaches primary and secondary path being different communication type (Abstract, column 3 lines 53-55, the redundant or secondary communication path may be a different line of sight path to the same or a different transmitter, or may be a lower frequency communication path. It is to be appreciated that this embodiment of the present invention, utilizing a primary and a secondary transmitter, allows a lower frequency non-line of sight link to be used as a backup for a primary communication path that does require line of sight).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Rochberger's system/method the steps of primary and secondary path being different

communication type as suggested by Schwengler. The motivation is that (as suggested by Schwengler, column 4 lines 42-47) by using different communication types for primary and backup paths, network can be made to be more reliable in case of failure in the primary path; thus overcome the problems associated with primary path failure by utilizing the appropriate different communication path to get around the fault. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

Rochberger and Schwengler do not explicitly teach both of a first and a second communication paths are established through same plurality of network nodes.

DeKoning in the similar field of endeavor related to data communication teaches both of a first and a second communication paths are established through same plurality of network nodes (Figure 3, column 11 lines 4-21).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Rochberger and Schwengler's system/method the steps of both of a first and a second communication paths are established through same plurality of network nodes as suggested by DeKoning. The motivation is that (as suggested by DeKoning, column 21 lines 53-64) such method provides enhanced redundancy. Known work (both of a first and a second communication paths are established through same plurality of network nodes) in one field of endeavor (DeKoning prior art) may prompt variations of it for use in either the same field or a different one (Rochberger and Schwengler prior art) based on design incentives (enhanced redundancy) or other market forces/market place incentives if the variations are predictable (multiple connection for enhanced redundancy is predictable) to one of ordinary skill in the art.

See Final Office Action at pages 1-3. With regard to the above limitation, the Examiner relies for support on col. 4, lines 42-47 of Schwengler. However, the Applicant points out that Schwengler only relates to transmissions in the Microwave band of the spectrum (e.g., frequencies greater than 12 GHz and going up to 30 GHz,

which is the typical frequency range for LMDS type communications using line of site transmission). (See Schwengler, col. 3, lines 11-17). In this regard, even though Schwengler discloses using different communication paths or different frequencies for a given communication path, the fact remains that Schwengler uses only one type of communication path, e.g., in the Microwave band, which is associated with only one communication protocol. Therefore, Schwengler does not overcome the deficiencies of Rochberger.

With regard to the DeKoning reference, the Applicant points out that it also deficient since it also does not disclose “wherein said first and second communication paths use different communication protocols and are of different communication types, and wherein both of said first and second communication paths are established through the same plurality of network nodes.” Even though DeKoning discloses redundant connections (between RDACs 118.1, 118.2 and disk arrays 108, 108.1), such connections are just duplicative connections of the same type (FC-AL) as the main connections, and using the same communication protocol. DeKoning, therefore, does not overcome the above deficiencies of Rochberger and Schwengler.

Accordingly, the proposed combination of Rochberger, Schwengler and DeKoning does not render independent claim 1 unpatentable, and a *prima facie* case of obviousness has not been established. The Applicant submits that claim 1 is allowable. Independent claims 11 and 21 are similar in many respects to the method disclosed in independent claim 1. Therefore, the Applicant submits that independent claims 11 and

21 are also allowable over the references cited in the Final Office Action at least for the reasons stated above with regard to claim 1.

B. Rejection of Dependent Claims 2-8, 10, 12, 14-18, 20, 22, 24-28 and 30-31

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 11 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Rochberger in view of Schwengler and DeKoning has been overcome and requests that the rejection be withdrawn. Additionally, claims 2-8, 10, 12, 14-18, 20, 22, 24-28 and 30-31 depend from independent claims 1, 11 and 21, respectively, and are, consequently, also respectfully submitted to be allowable based on the above arguments.

The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 2-8, 10, 12, 14-18, 20, 22, 24-28 and 30-31.

III. The Proposed Combination of Rochberger, Schwengler, DeKoning and Doi Does Not Render Claims 3, 9, 13, 19, 23 and 29 Unpatentable

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 11 and 21 under 35 U.S.C. § 103(a) as being anticipated by the combination of Rochberger, Schwengler and DeKoning has been overcome and

requests that the rejection be withdrawn. Additionally, since the additional cited reference (Doi) does not overcome the deficiencies of Rochberger, claims 3, 9, 13, 19, 23 and 29 depend from independent claims 1, 11 and 21, respectively, and are, consequently, also respectfully submitted to be allowable based on the above arguments. The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 3, 9, 13, 19, 23 and 29.

In general, the Final Office Action makes various statements regarding claims 1-31 and the cited references, which statements are now moot in light of the above. Thus, the Applicant will not address such statements at the present time. However, the Applicant expressly reserves the right to challenge such statements in the future should the need arise (e.g., if such statement should become relevant by appearing in a rejection of any current or future claim).

CONCLUSION

Based on at least the foregoing, the Applicant believes that all claims 1-31 are in condition for allowance. If the Examiner disagrees, the Applicant respectfully requests a telephone interview, and requests that the Examiner telephone the undersigned Attorney at (312) 775-8176.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

A Notice of Allowability is courteously solicited.

Respectfully submitted,

Date: 20-SEP-2010

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